



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 251,172	02 17 1999	AMMAR DERRAA	M130-034	2938

21567 7500 03 25 2002

WELLS ST. JOHN P.S.
601 W. FIRST
SUITE 1300
SPOKANE, WA 99201-3828

EXAMINER

RAMSEY, KENNETH J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 03 25 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/251,172

Applicant(s)

DERRAA, AMMAR

Examiner

Kenneth J. Ramsey

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

New Substitute Drawing Sheet

1. The new drawing sheet has been approved is has been substituted for Figure 1 of the drawings.

Prior Art Rejections

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodson et al in view of Lee et al (5,872,019) and Benjamin et al. Hodson et al discloses tiling 4 or more emitter base plates, independently addressable, to provide a large area display with a fast display refresh rate. As shown by Benjamin et al, column 7, line 62 through column 8, line 21, it was also known in the display art to provide addressing of a monolithic display from opposite sides to increase the refresh rate. Thus the advantage of a fast refresh rate occurs whether or not the display is monolithic or not. Thus, as indicated by Benjamin, while monolithic displays addressed from one side may have refresh rates suitable for an ordinary graphics VDU, for applications requiring a much faster refresh rate such as military applications or a high definition TV application, it would have been obvious for one of ordinary skill in the art to address pixels of a monolithic display from opposite sides as in Hodson et al in, with the difference in that the display is monolithic lieu of the tiled display of Hodson et al. The details of manufacture of the display as claimed are otherwise well known in the art as shown by

Lee et al '019. In particular, 1) as to claim 1, Lee et al '019, column 4, line 43 to column 5, line 67, teaches forming a plurality of discrete regions of emitter tips by selective doping, masking and etching to form individual discrete separately addressable emitter tip regions 33; 2) as to claim 10, Lee et al '019 further forms the emitter tip regions 33 from the material of the substrate the emitters being arranged into more than one demarcated, separately addressable region of emitters 33; 3) as to claim 18, Lee et al '019 teaches forming row and column address lines to selectively address the emitter regions 33; 4) as to claims 24 and 33, as above noted Lee et al forms the plurality (i.e. segmented) regions 33 of emitter tips by etching (i.e. removing portions of) the substrate and the emitter tip regions are separately addressable by the row and column address lines; and 5) as to claim 37, Lee et al '019 provides a monolithic substrate configured into plural separately addressable emitter regions 33 having emitters which are comprised of the material of the substrate. The teaching of Hodson et al of providing independent means to address 4 separate regions of the emitters to increase the refresh rate is clearly applicable to monolithic displays because as taught by Benjamin et al, certain applications require a faster refresh rate than previously possible with monolithic displays of appreciable size. As shown by Lee et al '019, the required technology to form the independently addressable emitter regions as claimed was well known at the time of applicants invention and as shown by Hodson et al and Benjamin et al motivation to provide independent display regions to increase the refresh rate as claim clearly existed at the time of applicants invention. Therefore, the invention is clearly obvious.

Art Unit: 2879

4. Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodson et al in view of Lee et al (5,872,019) and Benjamin et al as applied to claim 1, further in view of Lee et al (6,326,221). It would have been obvious to one of ordinary skill in the art to provide pixel isolation between top and bottom, right and left sides of pixel rows or columns by etching to divide a electrically connected region in two as taught by Lee et al '221, column 2, lines 60-62.

Response to Applicant's Arguments

5. As stated by the examiner in the last Office action, the details of manufacture of the claimed display (other than the step of providing plural independent driver means) as recited in the claims were well known at the time of applicant's invention. While applicants did not explicitly challenge that statement, the Lee et al references have been applied to rebut applicants' argument that such details were missing from the reference combination. Further, the examiner maintains that Hodson and Benjamin et al do provide motivation to make the proposed combination of the references as stated by the examiner. Clearly, Hodson and Benjamin each teach aspects of display technology of general applicability which would have been considered by one of ordinary skill in the display industry, thus that Hodson and Benjamin also each address differing needs of the display industry does not negate the fact that certain features of one reference are obviously applicable to the other. Also, since the claimed process steps (other than plural independent driver display taught by Hodson et al) were well known in the art at the time of applicant's invention, it is not seen that there would be any doubt that regarding an expectation of success or that all of the claimed limitations

Art Unit: 2879

were suggested by the reference combination. The references do not teach away from their combination as argued by applicant. That Hodson et al taught that larger displays could be achieved with fast refresh rates by tiling multiple substrates and providing independent driver means does not indicate that faster refresh rates were not desired for relatively smaller sized (although still large) monolithic displays. Nor has applicant shown that the proposed combination renders the prior art unsatisfactory for its intended purpose. The purpose of Hodson et al was to provide a large display where one high resolution image can be viewed and updated independently of at least one other image. See column 2, lines 26 to 29 of Hodson et al. The applicant has not shown that this purpose is defeated by the proposed reference combination.

6. **The citation of the Lee et al references is to support the examiner's statement that certain features were well know in the art at the time of applicant's invention, which statement was implicitly challenged by applicant's response.**

ACCORDINGLY, THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2879

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Directions for Responses

Any formal response to this communication should be directed to examiner Kenneth Ramsey, Art Unit 2879, and either

faxed to: 703-872-9319;

or mailed to: BOX AF
Assistant Commissioner For Patents
Washington, D.C. 20231

Technical inquiries concerning this communication should be directed to Kenneth J. Ramsey, (703) 308-2324 (voice), (703) 746-4832 (fax).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Kenneth J. Ramsey
Primary Examiner
Art Unit 2879

kjr
March 16, 2002

